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CURRENT LITERATURE.

BOOK REVIEWS.

Vines' "Elementary text-book."¹

THIS book was prepared to meet a demand for a less bulky and expensive volume than the author's *Students' text-book of botany*. So far as bulk is concerned, the present volume contains about 200 pages less than the former, and simplification has taken the form of omitting certain "difficult and debatable topics, such as the details of nuclear division, and the alternation of generations in the thallophytes."

As before, the book is divided into four parts, Morphology, Anatomy and Histology, Physiology, and Classification. The author lays no special stress upon the sequence of parts, stating that the different parts should be studied together, but he has concluded to let Physiology precede Classification, instead of following it, as in the *Students' text-book*.

The first three parts contain clear and compact statements of the general facts of morphology, anatomy, and physiology, as the author defines these subjects. As morphology is usually studied, however, its most essential facts are placed by the author under "classification." In fact, the morphology, as here presented, is impossible of comprehension without some knowledge of life histories, and of the evolution of organs as presented by different plant groups. The reviewer questions the advantage of presenting morphology to elementary students apart from plant groups.

The part devoted to physiology contains but seventy-six pages, and, of course, is an excellent presentation of what may be called physiology proper, or that phase of physiology which deals with life processes; but it is to be regretted that no mention is made of that phase of physiology which deals with life relations, the phase which we have come to call ecology. This subject has had sufficient development to demand treatment in any elementary text-book, and a few pages given to it could well have been spared from the dreary waste of angiosperm families (occupying nearly 100 pages), which no elementary student uses or can use to advantage.

In the fourth part, the first notable change is the recognition of gymnosperms as an independent group, which is certainly justifiable. Hence, the old group "phanerogams" or "spermatophytes" disappears, being replaced

¹VINES, SYDNEY H.: An elementary text-book of botany. 8vo. pp. xv + 611. The Macmillan Company: New York. 1898. \$2.25.

by gymnosperms and angiosperms. In spite of this change, however, the general characters of gymnosperms and angiosperms are discussed together under the heading "Phanerogamia." On account of the great differences between the groups this composite presentation is very confusing, and can hardly be justified by the fact that they both produce seeds. It would have been far less misleading, as well as clearer, had the two groups been kept consistently apart.

The thallophytes are treated as before, all of them being either algæ or fungi; and the treatment of each one of these divisions follows the old artificial method, convenient for simple presentation, but very misleading as to the facts of genetic relationship. It must be confessed that the treatment of thallophytes in this volume and in its predecessor does not represent our knowledge of the group. The account of the fungi especially is to be criticised. In the Filicinæ we note that the author bases his main divisions on eusporangy and leptosporangy, rather than upon homospory and heterospory, as in the former volume, a change more in accord with the present conceptions of the group.

The classification of angiosperms, however, can hardly be excused on any plea. Why the classification of Bentham and Hooker's *Genera Plantarum* was persisted in, in view of all that has been done since to increase our knowledge of this group, is something of a mystery. A certain amount of conservatism is wise in a text-book, especially in an elementary one, but there is a difference between conservatism and the perpetuation of a classification which has been outgrown.—J. M. C.

The flora of Roumania.²

BOTANISTS unfamiliar with Roumanian will be restricted to the names of plants in their use of this book. In the presentation of a flora, however, plant names represent no small amount of information. Only the spermatophytes and pteridophytes are included, and the classification is of the old type, as the division of dicotyledons into "dialypetalous," "gamopetalous," and "apetalous" series would indicate. Probably the most startling evidence of antiquity, however, is the inclusion of Gnetaceæ and Coniferæ among the families of apetalous dicotyledons!

The work is not a descriptive flora, but a list, with full bibliography, geographical distribution, and critical remarks. Unfortunately, the descriptions of new species are in the vernacular, instead of Latin. Over one hundred pages are devoted to a discussion of the geographical distribution of the plants of Roumania, which probably is the most interesting and important feature of the book.

² GRECESCU, DR. D.: *Conspectul Florei Romaniei*. 8vo. pp. xvi + 836. Friedländer & Sohn: Berlin. 1898. *M* 12.